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“I thought I was protected”

Abortion, contraceptive uptake and use among young women: a quantitative survey

Louise Bury, Lesley Hoggart, Victoria Louise Newton



Acronyms

CCG	Clinical Commissioning Group	IUS	Intra Uterine System
EC	Emergency contraception	LARC	Long Acting Reversible Contraception
EHC	Emergency Hormonal Contraception	MSI	Marie Stopes International
EMA	Early Medical Abortion	NHS	National Health Service
IMD	Index of Multiple Deprivation	SRH	Sexual and Reproductive Health
IUC	Intra Uterine Contraception	SPSS	Statistical Package for the Social Sciences
IUD	Intra Uterine Device		

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Executive summary

In 2012, when this research study began, the total number of abortions in England and Wales was 185,122. This was 2.5% fewer than in 2011 (189,931) [1]. The latest government abortion statistics show that there was a total of 185,331 abortions in 2013 which is 0.1% more than in 2012 [1]. The percentage of women undergoing an abortion who have had one or more previous abortions is increasing, with more than one in three abortions in the UK (37%) being a subsequent episode, an increase from 34% in 2010 and 31% in 2002. Among women under 25 years, 27% had a previous abortion in 2012, a slight increase since the previous year (26%). This proportion was also the same for under-25 year old women in 2013. This increase may indicate a gap between provision of abortion care and effective post abortion contraception use among this population.

Reasons for unintended pregnancy are well documented, and include non-use of contraception, failure of a contraceptive method, poor knowledge of methods, cultural or religious barriers, fear or misconceptions of side effects, and relationship changes [2-6]. Factors associated with why some women who have an abortion go on to have a subsequent abortion are less evidence based. It has been acknowledged that increasing access to contraceptive information and services is too simplistic a solution [7]. There are no known UK studies that provide quantitative data about post abortion contraceptive practices among young women. While post-abortion contraceptive services for young women have become a government policy priority, more needs to be understood about why some young women struggle to exercise reproductive control, and do not use contraception effectively; as well as about service provider and other factors that may influence its initiation and continuation.

Marie Stopes International (MSI) is one of the UK's leading reproductive health agencies and is the largest provider of abortion services. Given the lack of understanding regarding the complex interplay of factors that influence the incidence of successive episodes of abortion, MSI commissioned a mixed method study to investigate different aspects of young women's experiences of one or more unintended pregnancy ending in abortion. This paper reports on the second component of the study: a quantitative survey. It draws on the survey results to identify ways in which local sexual health strategies and services can support young women after abortion, helping them to improve their reproductive control and avoid further unintended pregnancies.

Methodology

Between June 2012 and May 2013, a cross sectional survey among young women in England and Wales (aged 16-24) who booked an abortion service at one of MSI's centres was undertaken. In total 1,641 women were recruited following their consultation, either on the telephone via MSI's centralised booking service, or at one of MSI's centres. The women were then contacted by telephone 4 weeks following their abortion for an interview. The interview response rate was 27% and a total of 430 women completed a telephone interview. Women were asked about their contraceptive use at the time of pregnancy, their experience of the abortion consultation and service, their post abortion contraception decision making, their attitudes towards pregnancy and abortion, and their perception of contraceptive risk taking. The women who had experienced a previous abortion were also asked about their contraceptive use between their two most recent abortions.

Findings

Below is a summary of the study's findings:

The study population

The women included in this study were representative of MSI clients on known characteristics.

- Among the sample, one quarter (25%) were aged 16-18 years, 38% were aged 19-21 and 37% aged 22-24. The majority (76%) were white. Just over half of women were in a relationship (54%) and one third were single (33%). Half of the women were from the two most deprived quintiles of deprivation (using the Multiple Deprivation Index), with 31 per cent from the two least deprived quintiles.
- The majority of the young women chose to have a surgical abortion (63%). Thirty-seven percent had a medical procedure.

Contraceptive use prior to abortion (all women)

- In this study more than half of the women (57%) who had an abortion at an MSI centre reported using contraception at the time they became pregnant. Women, who were single, black and from other ethnic groups (Asian and other) were more likely to report not having used contraception at the time of getting pregnant, and this was statistically significant.¹ There were no differences between women who had a previous abortion and those having one for the first time. There was also no association between age and deprivation area and the use of contraception. This indicates that women of different ages and socio economic backgrounds were equally, and actively, trying to avoid an unwanted pregnancy.
- The majority of women were using short term methods such as the pill (54%) and condoms (40%), and the main source of contraception provision (50%) was from General Practice (GP) followed by a pharmacy (25%). Self-reported inconsistent (26%) or improper method use (20%) accounted for most contraceptive failures.
- For the minority (43%) of women not using contraception at the time of pregnancy, the reasons given were mainly user related (69%) such as *not getting around to organising it, or getting carried away*. Misunderstandings about at which stage in their menstrual cycle they were at risk of getting pregnant was also an issue.
- 12% of all women used emergency contraception (EC). There was no difference between women who used contraception and those that did not at the time of becoming pregnant. The main reasons for not using EC were not being aware that contraception had failed (66%). For women who had not used contraception 31% had not known they were at risk of pregnancy and had therefore not used EC.

Women who have experienced more than one abortion

- A total of 121 (28%) women interviewed reported having had a previous abortion. This is in line with 2012 national data whereby 27% of women under 25 had a previous abortion [8].
- In terms of statistical significance, the data show that there are no specific groups of women who are more likely to have more than one abortion with the exception of age related factors.

¹ In this report data is only statistically significant when stated. To be statistically significant is when the p-value is equal to or below 0.05. This means there is evidence that there is a difference and the result is unlikely to be due to chance factors.

Women aged 19-24 compared to women aged 16-18 are more likely to have had more than one abortion. This is related to these women being older and thus having had more years of exposure to risk of pregnancy.

- Women from more deprived areas were more likely to have had a previous abortion – as were black women when compared with other ethnic groups. However, these differences were not statistically significant.
- Women who had experienced more than one abortion were as likely to report being in a stable relationship as women undergoing only one abortion.
- Women who had experienced a previous abortion were more likely to have a surgical abortion compared to women having an abortion for the first time (73% vs. 59%; $p=0.005$).

Contraceptive use following an abortion

- For all women, the uptake of contraception post abortion was very high with 86% of women reporting using a method at four weeks. The majority of these women (79%) were given their method at MSI, and 7% obtained a method from a different service provider. Most women continued with the method from MSI up until the time of the interview, although four of these women had stopped using the method and 20 women had not started the method.
- Although all women reported being provided with contraceptive advice during their consultation and at the time of their abortion, 21% ($n=89$) were discharged after their abortion without a method of contraception. These women either did not want to start using a method immediately after their abortion, their preferred method was not available, they were undecided what method to start, or they preferred to see a different service provider for contraception.
- At four weeks, 14% of women (62 out of 430) were not using contraception and over one half of these women were in a relationship. Women who were black ethnic origin compared to white and other ethnic groups were least likely to be using contraception following their abortion (73% vs. 88% & 86%; $p=0.018$). There were no associations found between not starting to use contraception post abortion and age at abortion, relationship status, or deprivation.
- A greater proportion of women who had a surgical abortion compared to those who had a medical abortion left the MSI centre with a method of contraception (85% vs. 69%; $p=0.000$). The difference between method of abortion and contraceptive uptake was still significant at four weeks (surgical: 88% vs. medical: 80%; $p=0.000$).
- There was no difference between women who had more than one abortion and those who had one for the first time with respect to their decision to start using contraception post abortion. There was, though, a significant difference regarding their choice of method. Women who had a previous abortion were more likely to start using long acting reversible contraception (LARC), such as the implant, IUD / IUS or injection, compared to women who had an abortion for the first time (74% & 59% respectively, $p=0.009$).
- More women who had a surgical abortion started to use a long acting reversible contraception (LARC) method (70% vs. 50% respectively; $p=0.000$), and this was statistically significant. Women who had a medical abortion were more likely to choose to start using the pill (48%).
- The most commonly selected single method for all women was the contraceptive pill. Thirty-five percent of all women and 40% of women having an abortion for the first time chose to use this method. Only 23% ($n=23$) of women who had experienced a previous abortion chose the pill; the majority of this group of women chose the implant (30%, $n=30$).
- A high proportion of women (87%) who received a method from MSI at the clinic said they were satisfied with the method they received. Half of these women (50%) said that their decision was influenced by what the MSI nurse had told them about the method.

- Furthermore, 59% of women said they were using the selected method for the first time – or had switched methods – thereby demonstrating the importance of ensuring a full range of contraceptive methods are available for women at the time of their abortion.

Contraceptive use between abortions

- Among the 121 women who had a previous abortion, 82% (n=99) started to use contraception following their last abortion, and the majority did so immediately (66%) or within one month (24%). Most women started to use the pill (54%) and 22% chose a LARC method.
- More than half of women (60%, n=59) decided to stop using their selected method of contraception – 27% stopped within 3 months and 71% did not use this method for more than one year.
- Women who stopped after three months were largely women who were experiencing side effects or who had run out of their supply of pills. The latter had not sought a new supply from another service provider. A higher proportion of women using a LARC method stopped using their method in under one year due to side effects such as menstrual irregularities.
- The majority of the women who had experienced a previous abortion started to use a LARC method following their most recent abortion. Some of these women had already tried a LARC but discontinued. This pattern may suggest that these women feel more motivated, and/or confident to use these methods, with improved counselling, following their most recent abortion.

Conclusion and recommendations

In conclusion, this study found that at the time of becoming pregnant a high number of young women were using contraception (mainly the pill) or did not believe they were at risk of pregnancy. Most of these women did not think (or realise) that they needed to use emergency contraception. In addition, the majority of young women who had a previous abortion had sought to protect themselves from another unintended pregnancy, but either self-reported contraceptive failure, or did not use it correctly.

While reducing the risk of unintended pregnancy, accessing contraception immediately following an abortion does not necessarily mean women will not have another unintended pregnancy and abortion. Although a high proportion of women started to use contraception (including LARC methods) following their previous abortion, many stopped these methods within one year. There was a significant (statistical) association with the method of abortion women selected and the type of contraceptive they either left the centre with or started to use by four weeks following their abortion. Women who chose surgical abortion had a greater uptake of contraception and LARC methods. The choices of methods available to women immediately following a medical abortion are limited because the provision of Intra Uterine Contraception (IUC) at the time of the second pill is not possible as the abortion is incomplete. Without a follow up visit for contraception these women may not be using the method of their choice.

For women who had experienced more than one abortion, following the most recent abortion there was a high uptake of contraception, with more of these women starting to use a LARC method. Women who were having an abortion for the first time were more likely to select short term methods, such as the pill. In view of what is known about patterns of women who have more than one abortion, it is likely that one quarter of women aged 16-24 who have an abortion for the first time will go on to have another unintended pregnancy and abortion. With the wide knowledge of the failure rates of user-dependent contraception methods, more needs to be done to help these young women exercise more effective control over their reproductive health.

This study identified significant differences between the characteristics of women and the likelihood of them not using contraception at the time of pregnancy (single, black ethnicity) and post abortion (black ethnicity), and thus indicates that these groups of women may be more at risk of having more than one

unintended pregnancy. There were, however, no differences found between the characteristics of women who have had a previous abortion and those having one for the first time. This finding makes it difficult to target services that improve contraception uptake to a particular group of women. It also corroborates other research evidence that challenges representations of women who have more than one abortion as “irresponsible” or somehow different from women who have one abortion [7, 9].

The results of this study demonstrate an urgent need to:

- improve access to, and provision of, the full range of contraceptive methods including emergency contraception, as recently recommended by NICE [10];
- facilitate more effective use of all contraceptive methods by providing continuing support to women who use these methods to:
 - help them manage side effects;
 - understand when the contraceptive pill may lose efficacy
- improve the quality of information about fertility available to women, including advice on the quick return to fertility after abortion.

In order to help women exercise reproductive control more effectively the following actions are recommended:

For Local Authorities and Clinical Commissioning Groups

1. **Systematic and adequate commissioning of contraceptive consultation and provision at the abortion provider:** Commissioners and providers need to give greater acknowledgement to the importance of contraceptive consultation and provision as part of the abortion service in order to enable sufficient time to ensure women’s contraceptive counselling needs are met. Providers need to supply a suitable bridging contraceptive method when a woman’s chosen method is not available, as well as develop strategies to deliver information tailored to the particular needs of women in this specific context.
2. **Develop improved pathways between abortion providers, and local contraception services, including General Practice:** Improved communication between abortion providers and locally based sexual health services is needed so that young women are informed about where to go for follow-up services after their abortion.
3. **Work towards the integration of abortion and contraception services:** Commissioning bodies should explore the possibility of bringing abortion and other sexual health services together effectively so that women can access all services in one place. This would enable women to be served and followed up more easily and efficiently. Abortion providers could press to extend further the range of services they offer to address women’s reproductive health portfolio of needs.
4. **To ensure adequate commissioning of specialist training for all providers of contraception:** Commissioners need to acknowledge and improve competency based training for provision and counselling about contraception, including emergency contraception, and sexual health among all non-specialist providers in primary care.
5. **Improve availability of, and young women’s access to, all forms of emergency contraception:** Emergency contraception needs to be made more widely available to women so they can access it at any time. EC also needs more publicity, including how and where the IUD as EC can be accessed when the EHC pill may not be effective in the ovulation cycle. There also needs to be improved information about EHC correct use and when it might fail.

For service providers

6. **Improve communication about the quick return to fertility following an abortion:** Service providers as well as other sexual health education sources need to highlight to women the quick return to fertility immediately after abortion, as well as provide more information about fertility and pregnancy risk in general.
7. **Investigate ways of improving women's understanding and use of emergency contraception:** Young women's knowledge of, and understanding about, EHC and IUD needs to be improved, such as exactly when to use EC (especially when the pill may not work effectively due to being sick, or forgetting to take it, or when the condom has failed), the time period during which EC can work, when it might fail, and where and how women can access both methods of EC. Women who choose a user-dependent method or no contraceptive method at all, should also be provided with EHC as a back up immediately following their abortion.
8. **Improve competency of all providers of contraception through specialist training:** There is a need for improved competency based training on contraception and sexual health among all non specialist providers in primary care. In particular, as the contraceptive pill is still the method of choice for many women – and widely provided (and / or counselled for) by General Practice (GP) – better communication is needed about the circumstances when the pill may fail to work, what women can do in regards to emergency contraception and where women can go if they have questions about the pill.
9. **Implement different ways to remind young women about renewing contraception:** Improve the use of available and popular technologies, such as automated text messaging, email or social media (with women's consent) to communicate reminders to resupply pill prescriptions, renew their injection, or when to take additional protection.
10. **Consider new ways to reduce LARC discontinuation:** Contraceptive advice and counselling should emphasise both the positive aspects of LARC and possible negative side effects, and should include advice about how to manage the latter. The introduction of follow up telephone calls or texts could be a cost effective way to address questions regarding their chosen method to enhance continuation, as well as to identify women who want to stop using their LARC method but may be willing to try another (long acting) method.
11. **Reduce the stigmatisation of women who have more than one abortion:** There are no clear criteria for categorising women who seek one or more abortion. Regardless of whether women have had a previous abortion or are having one for the first time, all women should be treated in the same way, and non-judgementally, by service providers.

For researchers

12. **Further research among abortion providers:** More research is needed to understand the service provider perspective about what happens at the abortion clinic with regard to the type and level of engagement between the provider and woman, particularly about her contraceptive options following an abortion.
13. **Research among minority, non English speaking women:** More understanding about the contraceptive decision making and behaviours post abortion among women from minority groups is needed to ensure their reproductive health needs are addressed.
14. **Further research about the integration of abortion and contraceptive services:** It would be useful to investigate the actual and potential barriers (e.g. attitudinal, financial) to greater integration of abortion services and contraception provision.

15. **Consumer led research among women for service provision:** More needs to be understood about the types of service that women who use them want, with regards to abortion and contraception provision, to ensure their engagement with services designed to meet their reproductive health needs. Such research could include explorations of the relationship between women's choice of abortion method and post abortion contraception, and choice of subsequent abortion methods.

1 Introduction

In 2012, when this research study began, the total number of abortions in England and Wales was 185,122. This was 2.5% fewer than in 2011 (189,931). The latest government abortion statistics show that there was a total of 185,331 abortions in 2013 which is 0.1% more than in 2012 [1]. In 2012, the abortion rate for women aged between 15 and 44 years was 16.5 per 1,000 with the highest rate among women aged twenty-one (31 per 1,000 in 2012) [8]. The percentage of women undergoing an abortion who have had one or more previous abortions² is increasing. More than one in three abortions (37%) in the UK was a repeat episode, an increase from 34% in 2010 and 31% in 2002. The proportion of women who have had more than one previous abortion also varies considerably by ethnic group: 33% of Asian women, 36% white women and 49% black women seeking abortion in 2012 had one or more previous abortions. These proportions have remained the same for 2013. In 2012 one in four of abortions to women under-25 years were a subsequent abortion (27%), a slight increase since previous years (26% in 2011, 25% in 2010 and 23% in 2007). This proportion was also the same for under-25 year old women in 2013. This may indicate a gap between provision of abortion care and effective post abortion contraception among this population. While contraceptive services for young women after abortion has become a government policy priority, more needs to be understood about why young women do not use effective contraception, and the factors and service provider inputs that influence its initiation and continuation.

Much of the literature about post abortion contraception use is either dated [3, 11] or based on U.S. [12-16] or European non-British studies [17-21]. There are a few recent studies carried out in the UK [22-24], but no known research with a particular focus on young women. The study presented here adds to our understanding about this group of women and their post abortion contraceptive behaviours.

Reasons why women (in general) have unintended pregnancies that end in abortion have been fairly well documented [2-6]. Factors associated with why women who have an abortion however may go on to have subsequent unintended pregnancy and abortions are less well understood. Explanations for unintended pregnancy include non-use of contraception or failure of a contraceptive method, poor knowledge due to lack of sex education, difficulty accessing contraceptive services, cultural/religious opposition to contraception, fear or misconceptions about contraceptive methods, and or relationship changes [2, 7]. However, as stated by Rowlands, the idea that increasing access to contraceptive information and services will ensure that women will use contraception more effectively, is too simplistic a view. There may be many other inter-related factors, contributing towards unintended and unwanted pregnancies. These include: unexplained risk taking behaviour, coerced sex, substance excess or abuse, mental health problems, as well as increased sexual activity [7]. More could be learnt about how these factors relate to each other and what particular circumstances, including behavioural, social and service related factors, may be associated with difficulties exercising reproductive control.

Given the lack of understanding regarding the complex interplay of many factors that are associated with why women have more than one unintended pregnancy that result in abortion, Marie Stopes International (MSI) commissioned the present study to investigate different aspects of young women's experience of having one or more unintended pregnancy and abortion. The findings will help to identify ways in which local sexual health strategies and targeted services to support young women following an abortion can address these issues.

² The term 'repeat abortion' which is commonly used to describe women who have had more than one abortion has not been used in this report. Rather, terms such as having had a previous abortion, having subsequent abortions, or more than one abortion, have been utilised. As explained by Rowlands et al: '*Finding appropriate language to describe the experience of a woman who has several abortions in her lifetime is challenging. Labels such as "recidivist", "habitual aborter" and "repeater" may introduce or reinforce stigma both for providers and for patients.*' See Rowlands, S., Cleland, K., & Trussell, J. More than one abortion. Chapter in *Abortion Care*. Rowlands, S. (ed). 2014 Cambridge University Press: Cambridge.

Marie Stopes International

Marie Stopes International (MSI) is one of the UK's leading reproductive health agencies and a main provider of abortion services outside of the NHS. In 2012, MSI performed 64,138 abortions, almost one third of all abortions in England and Wales (185,122). Among these abortions at MSI 88% were commissioned by the NHS. Forty one percent of these terminations (26,343) were for young women under-25 and out of these 27% or 7,188 were for young women who had experienced at least one previous abortion. In 2012, at the time of this study, MSI had 12 main centres in the UK that span across North and South England (Bristol, Birmingham, Central London, Essex, Leeds, Manchester, Maidstone, Reading, Sandwell, South Shields, South London and West London) and provide both surgical and medical abortion to clients from 128 out of 211 Clinical Commissioning Groups (CCG) nationally.

Study aims and objectives

This quantitative survey is the second component of the MSI mixed method study: 'Determinants of post abortion sexual and contraceptive behaviour that result in subsequent abortions among young women in England and Wales'. The first component consisted of analysis of clinical data for women who have more than one abortion over a five year span from 2007-2011.³ The third component was a qualitative longitudinal study following a cohort of young women over a period of ten months post abortion to investigate in-depth the factors associated with contraceptive use post abortion. The design of the survey questionnaire and methodology was informed by similar, recent studies from the USA, UK and Europe, as well as the technical expertise of the study's Advisory Committee [14, 18, 19, 22, 25-27]. The survey aimed to explore the factors associated with having more than one unintended pregnancy and abortion, with a focus on non-use or ineffective use of contraception. An overall aim was to provide recommendations to improve the quality and effectiveness of post-abortion contraceptive counselling and follow up.

The survey component thus had the following objectives:

1. determine factors associated with having more than one abortion;
2. measure uptake of contraception post-abortion four weeks after abortion; and
3. determine factors associated with uptake of contraception post-abortion.

³ This component was carried out first and consisted of a thorough analysis of MSI service data during the stated time period. The findings helped inform the design of the following two components. Bury, L. 2013. *Trends and characteristics of young women under 25 years who have had more than one abortion: a review of MSI client data between 2007-2011*. London: Marie Stopes UK (Unpublished).

2 Methods

Study design and data collection

The study involved a cross sectional survey among young women aged 16-24 years in the UK who had an abortion through one of MSI's main centres. Women were recruited following their consultation either on the telephone via MSI's centralised booking service, or at the centre on the same day as their procedure, or before booking to have their procedure. All eligible⁴ women were asked to take part in the study until a sufficient sample size was achieved. Consenting women were contacted by telephone 3-4 weeks following their abortion and asked again for their consent before being interviewed. Women received a text message reminding them of the agreed date and time of interview, and then at the time of interview up to four attempts were made to contact participants by telephone.

All interviews were conducted by trained staff, who administered an online questionnaire which lasted approximately 10 minutes. Women were asked about their contraceptive use at the time of pregnancy, experience of the abortion consultation and service, post abortion contraception decision making, attitudes towards pregnancy and abortion, risk taking, and – for women who had experienced a previous abortion – about contraception use in between their last two abortions. Information about women's age, ethnic background, relationship status, type of abortion and residency was obtained upon consent from women's clinical record. Information about relationship status was asked again at the time of the interview.

The study was approved by Brent NHS Research Ethics Committee. Recruitment started on 18 June 2012 and interviews commenced on 11 July 2012. Data collection continued for 10 months and was completed on 10 May 2013.

Study sample

During the study period a total of 1,641 women were initially recruited. Recruitment of women from the MSI centres was more difficult than recruitment via the telephone booking service and therefore contributed a smaller proportion to the overall sample. The interview response rate was 27%, with the main reason for loss to follow up being not answering the phone (53%). Other reasons included declining to take part, not proceeding with the abortion, cancelling the appointment, or that an incorrect phone number was provided. In total, 430 interviews were completed.

The overall sample was representative of MSI clients on known characteristics. The sample from each MSI centre was approximately proportionate to the size of the centre. The majority of women chose to have a surgical procedure as opposed to medical abortion⁵ (see Table 1).

⁴ Women who were excluded from the study included those whose command of English was poor (i.e. unable to conduct a telephone interview), were not resident of the UK, were not residing in the UK four weeks after their abortion, did not have access to a telephone, and who were having a termination due to foetal abnormalities.

⁵ Medical abortion is used in this report and refers to early medical abortion (EMA), which at time of the survey, was provided by MSI for up to 9 weeks gestation.

Table 1: Sample details

	% (N)
Method of consultation (and recruitment)	
Telephone	84.0 (361)
Centre	16.0 (69)
MSI Centre attended for abortion	
Bristol	5.0 (21)
Central London	4.3 (18)
Essex	23.4 (98)
Leeds	10.5 (44)
Maidstone	17.2 (72)
Manchester	6.0 (25)
Reading	6.0 (25)
South London	10.0 (42)
West London	17.7 (74)
<i>Total number</i>	<i>419</i>
Chosen method of abortion	
Surgical	62.6 (263)
Early Medical (EMA)	37.4 (157)
<i>Total number</i>	<i>420</i>
Total sample	430

Data analysis

Data were uploaded and analysis carried out using Statistical Package for Social Sciences (SPSS). Prior to analysis the post code data obtained from clients' records were allocated a deprivation score using the GeoConvert tool which was created by Mimas at the University of Manchester and is a part of the UK Data Service Census Support.⁶ The deprivation score is based on the national distribution index of multiple deprivation (IMD) that combines a number of indicators chosen to cover a range of economic, social and housing issues, to provide a single deprivation score for each small area in England. The Pearson chi-square test was used to compare distributions of factors (such as socio demographic characteristics, contraceptive use at time of pregnancy, birth history and attitudes towards pregnancy and abortion and their association with the dependent variables of having had a previous abortion and post abortion contraceptive uptake in order to test the null hypothesis that these factors are not related to the outcome. The following report provides a descriptive analysis of the data with a focus upon women's post-abortion contraceptive uptake and experience of subsequent abortion.

⁶ <http://geoconvert.mimas.ac.uk/help/background.htm>

3 Results

3.1 Socio-demographic characteristics of women having an abortion

Table 2 provides a breakdown of the sample by age, ethnicity, and socio-economic status. Out of the 430 women there were fewer in the 16-18 year age group (24.7%) than the 19-21 (38.1%) and 22-24 (37.2%) age groups. Socio economic status of respondents was estimated based on the deprivation score awarded to their post code. Abortion clients tended to be from more deprived areas, with 28.6% and 20.5% from the second and top quintiles of deprivation respectively, compared to 16.2% and 15% from below average and least deprived quintile areas.

Table 2: Percent distribution of women who had an abortion by age, ethnicity, relationship status and socio-economic status

Total women (n=430) % (N)	
Age at abortion	
16-18	24.7 (106)
19-21	38.1 (164)
22-24	37.2 (160)
Ethnic group⁷	
White or white British	76.3 (328)
Black or black British	11.9 (51)
Other	11.9 (51)
Relationship status (n=419)	
No current boyfriend / partner	32.7 (137)
In a relationship	53.5 (224)
Living with partner or married	13.5 (58)
Deprivation quintile (residency)	
Least deprived	15.0 (63)
Below average deprivation	16.2 (68)
Average	19.6 (82)
Above average deprivation	28.6 (120)
Most deprived	20.5 (86)
Total women	100.0 (430)

The majority of women were white or white British (76.3%). Compared to the national population of women aged 16-24, the number of black or black British women who had an abortion was

⁷ Ethnic group was condensed into the following three categories in order for the denominator to be large enough to conduct various analyses with this variable. Other ethnic groups included Asian or Asian British; mixed ethnic group and any other ethnic group. Numbers for these respective ethnic groups were too small to carry out analysis.

disproportionately high, with 11.9% of women being black compared to approximately 3.3% of the national population⁸. It should be noted, however, that most MSI clinics are based in urban areas where the percentage of women that are black is higher. More than half of women reported to be in a relationship at the time of the interview (53.5%), and one third (32.7%) said that they were currently single. An equal proportion of women from different ethnic groups were either in a relationship or single.

3.2 Contraceptive use at time of pregnancy

Out of all 430 women, 57% (n=245) reported to have used a method of contraception at the time of becoming pregnant. The use of contraception among women who have had one or more previous abortion was the same as among women who were having an abortion for the first time (57%, n=69 and n=176 respectively).

Table 3: Socio demographic characteristics of women who used contraception at the time of pregnancy

	Used contraception at time of pregnancy % (N)	p-value ⁹
Age at abortion		
16-18	58.5 (62)	0.933
19-21	56.7 (93)	
22-24	56.2 (90)	
Ethnic group		
White or white British	60.4 (198)	0.033
Black or black British	49.0 (25)	
Other	43.1 (22)	
Relationship status (n=419)		
No current boyfriend / partner	46.7 (64)	0.012
In a relationship	63.4 (142)	
Living with partner or married	56.9 (33)	
Deprivation quintile		
Least deprived	60.3 (38)	0.529
Below average deprivation	54.4 (37)	
Average	62.2 (51)	
Above average deprivation	51.7 (62)	
Most deprived	60.5 (52)	
Total women	57.0 (245)	

⁸ Source: <http://www.theguardian.com/news/datablog/2010/feb/26/population-ethnic-race-age-statistics>
data taken from the 2007 census for England and Wales, produced by the Office for National Statistics.

⁹ A p-value equal to or below 0.05 is considered to be statistically significant (i.e. there is evidence that there is a difference and the result is unlikely to be due to chance factors).

Table 3 shows the socio demographic characteristics of women who used contraception at the time of pregnancy. There were statistically significant differences according to ethnicity and relationship status in the probability of using contraception, with white women most likely to have used contraception, and black or other minority ethnic groups most likely to have not used contraception at the time of getting pregnant (60.4% vs. 49% & 43.1% respectively, $p=0.033$). Women who were in a relationship or married at the time of having their abortion were also more likely to have been using contraception than were women who were not in a relationship (63.4% & 56.9% vs. 46.7%, $p=0.012$). There were no differences in reported contraceptive use by age group or level of deprivation.

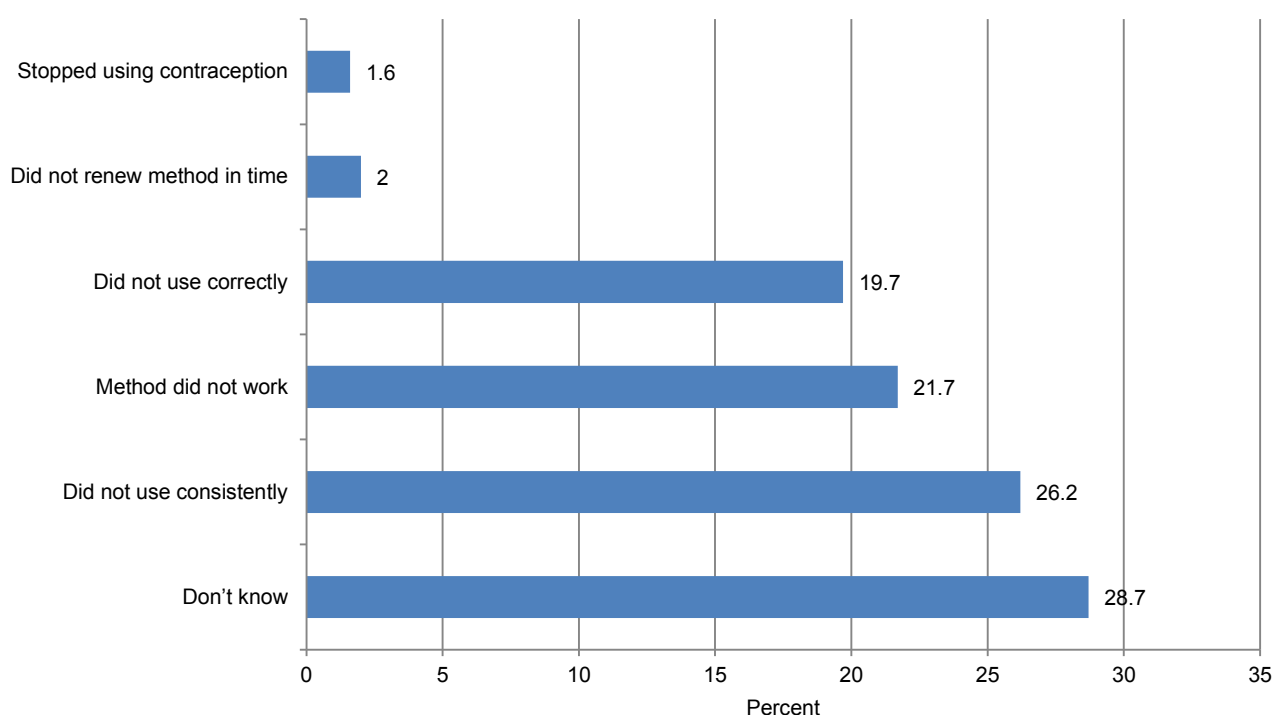
Women who reported having used a method of contraception were then asked about what method they had been using, where they had obtained this method and the reason why they believed the method to have failed to prevent pregnancy. The majority of women reported using a short-term method at the time they became pregnant, with 30.4% ($n=131$) of all women saying they were using the contraceptive pill and 22.8% ($n=98$) the condom. The proportions of women who used other methods were less than two percent (see table 4). The most common source of contraceptive method was the GP (49.8%; $n=121$), followed by a pharmacy or shop (23.5%; $n=57$) and a sexual health / family planning clinic (19.8%; $n=48$). Furthermore, 76.2% ($n=99$) of pill users obtained their supply of contraception from the GP, and 18.5% ($n=24$) from a sexual health clinic.

Table 4: Contraceptive use and non use, and source of contraceptive method at the time of becoming pregnant

	Total women ($n=430$) % (N)
Not using contraception	43.0 (185)
Pills	30.4 (131)
Condoms	22.8 (98)
Injection	0.9 (4)
Implant	1.2 (5)
IUD	0.2 (1)
Hormonal patch	1.2 (5)
Total women	100.0 (430)
Source of method ($n=245$)	
Abortion provider	1.2 (3)
Brook clinic	2.9 (7)
SH clinic (NHS)	19.8 (48)
General Practitioner (GP)	49.8 (121)
Pharmacy / shop	23.5 (57)
Partner	2.9 (7)

Many of the unintended pregnancies were a result of inconsistent or improper use of short term methods (see Figure 1), although the most common explanation women reported was: not knowing why their method had failed to protect them from pregnancy (28.7%).

Figure 1: Reasons reported by women why their contraception did not work (n=245)



Reasons for non-use of contraception at time of pregnancy

Among the women who said they *did not use contraception* at the time of becoming pregnant (43%; n=185), Table 5 shows the categories of reasons why they did not use contraception. The question was open ended and free text answers have been grouped under the four types of reasons. The majority of women claimed user-related issues were the main constraints for not using contraception at the time of pregnancy (69.2%). Within this user-related category, the most commonly cited types of reasons given were *no reason at all*, and *didn't get round to it, lack of thought*, followed by *got carried away / heat of the moment*, and *perceived low risk of pregnancy*. Sixteen percent of women (n=30) who did not use contraception said it was because of reasons related to the method such as *systemic, local side effects*, and *technical difficulty using a method* (particularly among women who were new to the method). Other reasons for not using were partner or relationship related issues (6.5%) such as *not in a steady relationship; was not intending to have sex*, as well as access related barriers to contraception (8.1%) such as *waiting for an appointment or in between methods*.

Table 5: Reasons why women did not use contraception at the time of pregnancy (n=185)

	% (N)
Reason why did not use contraception	
Method related	16.2 (30)
User related	69.2 (128)
Partner / relationship related	6.5 (12)
Access related	8.1 (15)
Total women	100.0 (185)

Use of emergency hormonal contraception

Women who used contraception at the time of their pregnancy – as well as women who did not – were asked if they had used emergency hormonal contraception (EHC). A high proportion of women who did not use contraception at the time of pregnancy did not seek to use EHC (87%, n=161). Approximately one third of these women (31.1%) either did not know why or said there was no reason why they did not use it but they *just didn't think about it at the time*.

Another third of women believed they could not get pregnant (31.1%), either because they thought it was a safe time during their menstrual cycle, such as *I used withdrawal method and didn't think there was any need*, and *I thought that the pill that I had recently stopped taking would still be in my system*, or because their *...partner told me he was infertile*. Just over one quarter of women (29.5%) also said that they *did not think to take EC* (see Table 6). A smaller proportion of women said that it was difficult to access EHC, as the following quotes explain: *I was unable to get to the clinic in time; I just couldn't get it in time and everywhere was closed*; and *I was working and it was the weekend, I did not know where to go or what to do*.

Table 6: Percentage of women who did not use contraception that used emergency contraception, and the reasons why some did not

	Women who did not use contraception (n=185)	Women who did use contraception (n=245)
Used emergency hormonal contraception		
Yes	13.0 (24)	11.0 (27)
No	87.0 (161)	89.0 (218)
Reason why did not use EHC (n=161)		
Didn't think could get pregnant	31.1 (50)	
Don't know / No reason	31.1 (50)	-
Didn't think to take EHC	29.8 (48)	-
Difficult to access	6.8 (11)	-
Fear of side effects	1.2 (2)	-
Reason why did not use EHC (n=218)		
Didn't think could get pregnant / unaware contraception had failed	-	65.6 (139)
Don't know / No reason	-	17.0 (36)
Didn't get round to it	-	14.2 (30)
Other reason	-	3.4 (7)
Total	-	212

Amongst the women who may have thought they were protected from pregnancy by their contraceptive method, perhaps unsurprisingly, only 11% used emergency contraception. The majority (65.6%) said they did not use EHC as they were unaware their contraceptive method had failed, even if they had not been using the method perfectly: *I didn't think that I could get pregnant if the pill was not taken at the*

same time each day; I forgot my pill on one day so I took two [pills] the next. I thought I would be safe as I've done that before and I was confused about when I had taken my pill so didn't think I needed to [take emergency contraception]. Other women simply did not realise the method had not worked or had run out: I didn't realise the injection was overdue at the time. Seventeen percent said there was no reason why they did not take EHC or that they didn't know why they did use EHC, and 14.2% said they did not get around to getting it in time. Other reasons (3.4%) for not using EHC among women whose contraception had failed included: I couldn't get to a pharmacy at the time as was working, I found out too late, it was a planned pregnancy but later changed my mind and my partner didn't want me to take the 'morning after pill'.

Risk taking

All women were asked how regularly they had used contraception in the last 12 months prior to this pregnancy – as well as if they have had a sexually transmitted infection (STI) – to provide data related to risk-taking behaviour. Forty one percent (n=176) of all women said they used contraception all of the time in the last 12 months, and a further 34% said they used it most of the time (n=145). Forty nine women (11.4%) said that they never or hardly ever used contraception in the last 12 months. Eighteen per cent (n=77) said they had had an STI.

Among these women who reported to have had a STI 39% (n=30) and 32.5% (n=25) said they used contraception in the last 12 months all the time and most of the time, 18.2% (n=14) said some of the time, and 6.5% (n=5) and 3.6% (n=3) said hardly ever or never, respectively.

3.3 Women who have experienced more than one abortion

Out of 430 women interviewed, 121 (28%) said they had had one or more abortion prior to the one at which they were recruited to the study, and 309 (72%) women said this was their first abortion. The proportion of women who have had a previous abortion is in line with MSI's client data, whereby in 2011 27.3% of women under 25 years disclosed during their consultation that they had already had an abortion. This is also in line with national data for 2012 and 2013¹⁰ whereby for both years 27% of abortions to women aged under 25 in England and Wales were to women who had one or more abortions.

It should be noted that the study did not follow women over a long time period. It is therefore unknown whether women who were having an abortion for the first time would go on to have another abortion in the future. It may be assumed that, in line with current trends, around a quarter of these women will have a subsequent abortion, and this should be kept in mind when comparing the two groups: women who have had a previous abortion and women who had an abortion for the first time.

¹⁰ The Department of Health, 2013. Abortion Statistics, England and Wales: 2012, and Department of Health, 2014. Abortion Statistics, England and Wales: 2013. See <https://www.gov.uk/government/publications/report-on-abortion-statistics-in-england-and-wales-for-2012> and <https://www.gov.uk/government/statistical-data-sets/abortion-statistics-england-and-wales-2013>

Table 7: Proportion within each socio-demographic category who have had a previous abortion or had an abortion for the first time (n=430)

	Had a previous abortion %(N)	First time abortion %(N)	Total women	p-value
Age at abortion				
16-18 year olds	12.3 (13)	87.7 (93)	100.0 (106)	0.000
19-21 year olds	30.5 (50)	69.5 (114)	100.0 (164)	
22-24 year olds	36.2 (58)	63.8 (102)	100.0 (160)	
Ethnic group				
White or white British	28.0 (92)	72.0 (236)	100.0 (328)	0.140
Black or black British	37.3 (19)	62.7 (32)	100.0 (51)	
Other	19.6 (10)	80.4 (41)	100.0 (51)	
Relationship status				
No current boyfriend / partner	27.7 (38)	72.3 (99)	100.0 (137)	0.464
In a relationship	28.6 (64)	71.4 (160)	100.0 (224)	
Living with partner or married	29.3 (17)	70.7 (41)	100.0 (58)	
Deprivation score (residency)				
Least deprived	17.5 (11)	82.5 (52)	100.0 (63)	0.096
Below average deprivation	23.5 (16)	76.5 (52)	100.0 (68)	
Average	29.3 (24)	70.7 (58)	100.0 (82)	
Above average deprivation	35.8 (43)	64.2 (77)	100.0 (110)	
Most deprived	30.2 (26)	69.8 (60)	100.0 (86)	
Total women	28.1 (121)	71.9 (309)	100.0 (430)	

Table 7 shows the relationship between socio-demographic characteristics and whether the woman had experienced a previous abortion. Young women aged 16-18 were far less likely than women aged 19-21 and 22-24 years to have had a prior abortion, which is to be expected since older women have more years of exposure to the risk of an unintended pregnancy (12.3% vs. 30.5% & 36.1%; $p < 0.000$). Analysis of deprivation level found that those from more deprived areas were more likely to be having a subsequent abortion than women from less deprived areas (35.8% & 30.5% vs. 23.5 & 17.5%), although this relationship was not statistically significant.

There was a difference between ethnic group and the likelihood of having had a previous abortion with 37.3% of black women having had a previous abortion compared to 28% of white and 17.6% of women from other ethnic groups, although this was also not significant. There was also no association found between relationship status and having had a previous abortion.

Table 8 shows the relationship between birth history and whether the woman had had a prior abortion. Those that had one or more children were more likely to be having a subsequent abortion (39.2% & 44.8% vs. 23.6%; $p = 0.003$).

Table 8: Percentage of women who had a previous abortion and first time abortion by birth history (n=430)

	Had a previous abortion %(N)	First time abortion %(N)	Total women	p-value
Number of births				
0	23.6 (75)	76.4 (243)	100.0 (318)	0.003
1	39.2% (31)	60.8 (48)	100.0 (79)	
2+	44.8% (13)	55.2 (16)	100.0 (29)	
Ever had a miscarriage				
Yes	42.6 (20)	57.4 (27)	100.0 (47)	0.015
No	25.8 (98)	74.2 (282)	100.0 (380)	
Total women	27.8 (118)	72.4 (309)	100.0 (430)	

After a multiple variable logistic regression to test for confounding between the factors age, number of births and experience of miscarriage and the likelihood of having had a previous abortion, only age remained significant at the 95% confidence level, with those aged 19-24 being more likely to have had a previous abortion compared to 16-18 year olds (i.e. women aged 19-21 have a 2.7 higher chance of having another abortion than if 16-18, and for women aged 22-24 they have 3.4 higher chance than 16-18 year olds).

Table 9: Multiple variable analysis for birth history and age and likelihood of having had a previous abortion

	Odds ratio	95% confidence interval	
		Lower	Upper
Had a miscarriage	0.600	0.309	1.164
Had given birth previously	1.608	0.979	2.643
Age at abortion			
16-18	1.00	1.00	
19-21	2.773	1.407	5.465
22-24	3.406	1.723	6.735

No relationship was found between contraceptive use at pregnancy and having had a previous abortion. Out of all 430 women, 57% (n=245) reported having used a method of contraception at the time of getting pregnant. The use of contraception among women who had had one or more previous abortions was the same as among women who were having an abortion for the first time (57%, n=69 and n=176 respectively) (see Table 10). There was a statistically significant relationship between the type of abortion women chose to have and whether they were having a subsequent abortion – with women having a surgical abortion being more likely to have had a previous abortion, than those having a medical abortion (33.1% vs. 20.4%; <0.005).

Table 10: Contraceptive use at the time of recent pregnancy and type of abortion procedure by whether women had had a previous abortion or one for the first time (n=430)

	Had a previous abortion (n=121) %(N)	First time abortion (n=309) %(N)	Total women	p-value
Contraceptive use at time of recent pregnancy				
Did use (245)	28.2 (69)	71.8 (176)	100.0 (245)	0.99
Did not use (185)	28.1 (52)	71.9 (133)	100.0 (185)	
Type of abortion				
Surgical (263)	33.1 (87)	66.9 (176)	100.0 (263)	0.005
Medical (157)	20.4 (32)	79.6 (125)	100.0 (157)	
Total women	27.8 (118)	72.4 (309)	100.0 (430)	

Views and attitudes

All women were asked to rate their level of agreement or disagreement with a list of statements about abortion and pregnancy. More than three quarters of women strongly agreed with the statement “having an abortion was the right thing for me to do” (78.1%). As well as most women feeling confident that they made the right decision to have an abortion, a relatively high proportion also strongly disagreed with “most of the time it is wrong for a woman with an unwanted pregnancy to have a abortion” (45.2%).

A high proportion of women (88%) both those who had a previous abortion and those women who had an abortion for the first time – strongly agreed with “following my abortion, it is important to me not to get pregnancy again in the next 6 months” indicating a high motivation to want to protect themselves from pregnancy.

Table 11: Attitudes towards pregnancy and abortion by women who have had a previous abortion and one for the first time (n=430)

	Had a previous abortion (n=121) %(N)	First time abortion (n=309) %(N)	Total women (n=430)
Having an abortion was the right thing for me to do			
Strongly agree	81.0 (98)	76.9 (233)	78.1 (331)
Most of the time it is wrong for a woman with an unwanted pregnancy to have an abortion			
Strongly disagree	51.3 (61)	42.8 (130)	45.2 (191)
Following my abortion, it is important to me not to get pregnant again in the next 6 months			
Strongly agree	85.1 (103)	89.4 (270)	88.2 (373)
I made the decision to have an abortion all by myself			
Strongly agree	76.0 (92)	66.3 (203)	69.1 (295)
If I got pregnant again in the next 6 months I would feel ...			
Pleased	19.0 (23)	10.1 (31)	12.6 (54)
Upset	61.2 (74)	65.4 (200)	64.2 (274)
Don't know	19.8 (24)	24.5 (75)	23.2 (99)
If I got pregnant again in next 6 months I would ...			
Continue with the pregnancy	41.3 (50)	29.1 (89)	32.6 (139)
Have an abortion	24.0 (29)	29.7 (91)	28.1 (120)
Don't know	32.2 (39)	39.9 (122)	37.7 (161)
Other (use EC, consider adoption)	2.4 (3)	1.3 (4)	1.6 (7)

More women having a subsequent abortion than women having one for the first time said they strongly agreed with the statement that “I made the decision to have an abortion all by myself” (76% and 66.3% respectively). Nearly two thirds of women said they would feel upset if they got pregnant again in the next 6 months, although 19% of women who have had a previous abortion said they would be pleased compared to 10.1% of women who had an abortion for the first time. One quarter of women (28%) said they would have an abortion if they got pregnant again in the next 6 months, although the majority of women who had a previous abortion (41%) also said they would continue with the pregnancy, and one third of both women who had a previous (32.2%) and first time abortion (39.9%) said they don't know what they would do if they got pregnant again in the next 6 months (see Table 11).

3.4 Post-abortion contraception uptake

The uptake of contraception at four weeks post abortion was 85.6% (n=368). This includes women who received a method from the MSI centre and continued to use it or started to use it at four weeks following their abortion. It also includes women who saw another contraceptive service provider after their abortion or who had started a method that they acquired by themselves, e.g. purchased condoms. A total of 62 women were not using contraception (14.4%) at the time of the survey.

There was a significant difference between the method of abortion and contraception uptake, whereby women who had a surgical abortion were more likely to be using a method of contraception at four weeks post abortion compared to women who had a medical abortion (88.2% vs. 80.3%; $p = 0.026$). There was no difference between women who had more than one abortion and those who had one. Among the 368 who started to use contraception following their abortion, more than half (59.2%, $n=218$) said they were using their chosen method for the first time or they had switched methods. Furthermore, 49.8% of all women said their decision to adopt the chosen method was influenced by what the MSI nurse had told them about it.

Table 12: Proportion within each socio-demographic category who started to use contraception by 4 weeks post abortion (n=430)

	Using contraception 4 weeks after abortion (n=368) % (N)	Not using contraception 4 weeks after abortion (n=62) % (N)	Total women % (N)	p-value
Age at abortion				
16-18 year olds	87.7 (93)	12.3 (13)	100.0 (106)	0.743
19-21 year olds	85.4 (140)	14.6 (24)	100.0 (165)	
22-24 year olds	84.4 (135)	15.6 (25)	100.0 (160)	
Ethnic group				
White or white British	87.5 (287)	12.5 (41)	100.0 (328)	0.018
Black or black British	72.5 (37)	27.5 (14)	100.0 (51)	
Other	86.3 (44)	13.7 (7)	100.0 (51)	
Relationship status at time of interview				
No current boyfriend / partner	83.2 (124)	16.8 (23)	100.0 (137)	0.625
In a relationship	86.6 (194)	13.4 (30)	100.0 (224)	
Living with partner or married	89.7 (52)	10.3 (6)	100.0 (52)	
Deprivation score (residency)				
Least deprived	88.9 (56)	11.1 (7)	100.0 (63)	0.454
Below average deprivation	83.8 (57)	16.2 (11)	100.0 (68)	
Average	90.2 (74)	9.8 (8)	100.0 (82)	
Above average deprivation	81.7 (98)	18.3 (22)	100.0 (120)	
Most deprived	84.9 (73)	15.1 (13)	100.0 (86)	
Total women	85.6 (368)	14.4 (62)	100.0 (430)	

Table 12 shows the relationship between socio-demographic characteristics and whether women were using contraception at four weeks post abortion. Black women were less likely to be using contraception compared to women of white and other ethnic groups (72.5% vs. 87.5% & 86.3%; $p=0.018$). No associations were found between age at abortion, relationship status and deprivation score and the likelihood of starting to use contraception at four weeks. However, the majority of women were in a relationship at four weeks following their abortion ($n=276$, 64.2%) – implying they could have returned to regular sexual activity – and 36 (26.7%) of these women were not using contraception.

Table 13 shows the relationship between women's birth history and if they were using contraception at four weeks following their abortion. No associations were found.

Table 13: Post abortion contraception uptake by birth history

	Using contraception 4 weeks after abortion ($n=368$) % (N)	Not using contraception 4 weeks after abortion ($n=62$) % (N)	Total women % (N)	p-value
Number of births				
0	85.1 (274)	14.9 (48)	100 (322)	0.489
1	84.8 (67)	15.2 (12)	100 (79)	
2+	93.1 (27)	6.9 (2)	100 (29)	
Ever had a miscarriage				
Yes	89.4 (42)	10.6 (5)	100 (47)	0.423
No	85.0 (323)	15.0 (57)	100 (380)	
Total women	85.6 (368)	14.4 (62)	100.0 (430)	

Table 14 shows the relationship between contraceptive use at the time of getting pregnant, if the abortion was a first or subsequent abortion, and whether the woman was using contraception at four weeks following her most recent abortion. Slightly more women who reported not having used contraception at the time of the most recent pregnancy, compared to women who did, had also not started to use contraception by four weeks post their abortion (17% and 13% respectively).

Although the associations with whether a woman had a previous abortion or if it was their first abortion and the uptake of contraception at four weeks were not significant, slightly fewer women who had more than one abortion were not using contraception at four weeks compared to women who had an abortion for the first time (11.6% and 15.5% respectively). In addition (although not shown in Table 14), women who said they would be upset if they got pregnant in the next 6 months following their abortion were more likely to have had an abortion for the first time rather than having experienced a previous abortion (73% vs. 27%; $p=0.022$).

Table 14: Post abortion contraception uptake by contraceptive use at the time of most recent pregnancy and first time or subsequent abortion (n=430)

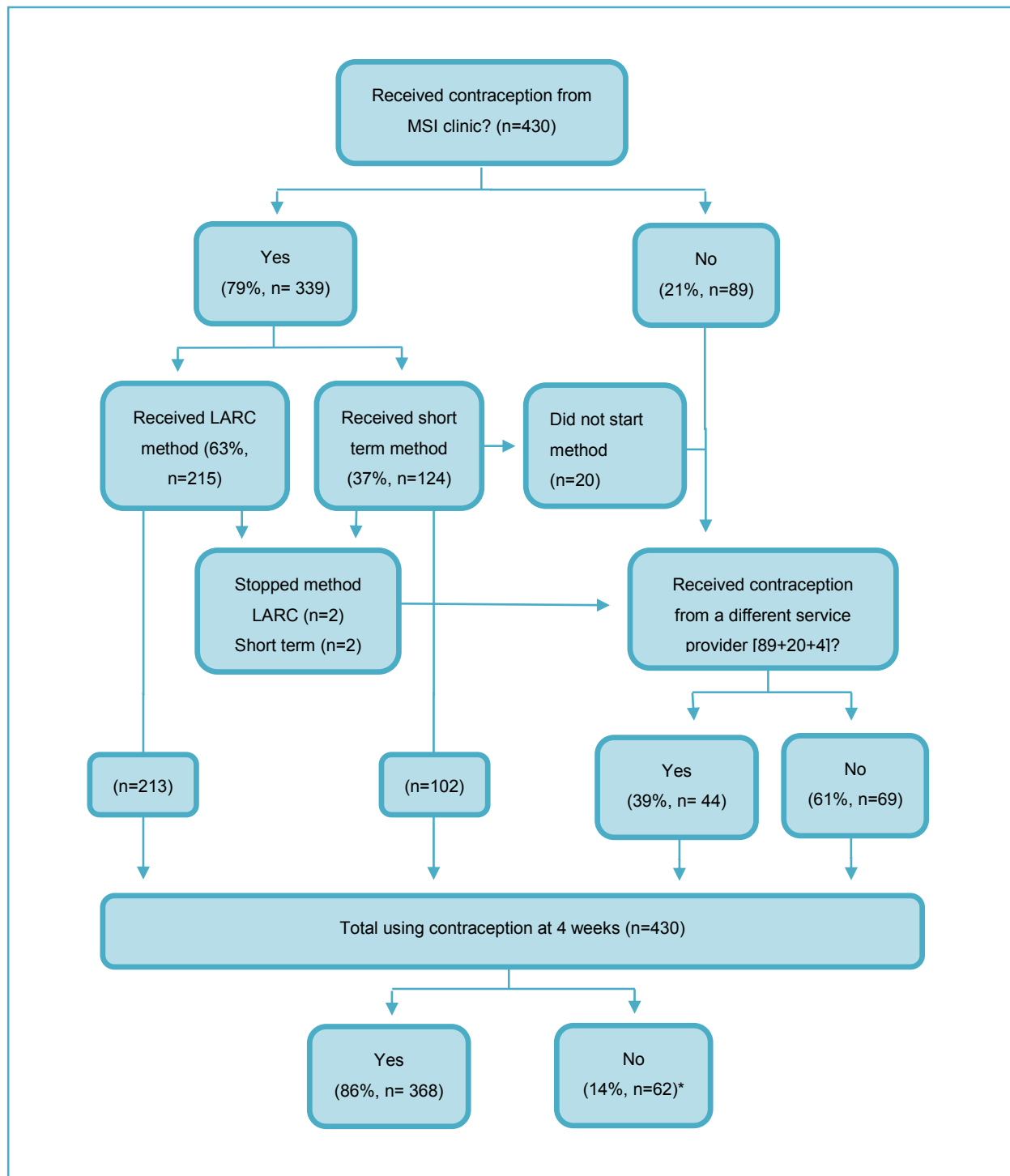
	Using contraception 4 weeks after abortion (n=368) %(N)	Not using contraception 4 weeks after abortion (n=62) % (N)	Total women % (N)	p-value
Contraceptive use at time of recent pregnancy				
Did use	87.3 (214)	12.7 (31)	100.0 (245)	0.230
Did not use	83.2 (154)	16.8 (31)	100.0 (185)	
Order of abortion				
Had a previous abortion	88.4 (107)	11.6 (14)	100.0 (121)	0.293
First time abortion	84.5 (261)	15.5 (48)	100.0 (309)	
Total women	85.6 (368)	14.4 (62)	100.0 (430)	

Contraceptive method and source of method

Figure 2 shows the flow of decision making among women following their abortion and what type of method they chose from which service provider. Out of the 368 women who were using contraception at four weeks, 339 women or 79% of all women received a method of contraception from an MSI centre immediately following their abortion. Among these women, 87% were satisfied with the method they were given, with slightly more women who were having an abortion for the first time saying they were satisfied with the method they left the clinic with than women who had undergone a previous abortion (89%, n=212 and 82%, n=82 respectively).

Eighty nine women (21%) did not leave the clinic with a method. Reasons for not accepting a method from MSI varied from the *method of choice not available*, *prefer to go back to my doctor*, *want to wait for my body to get back to normal*, and *don't know* (which may imply a sense of uncertainty about what method to start using).

Figure 2: Flow chart showing the decision making for post abortion contraceptive uptake at 4 weeks among women seeking abortion at MSI (n=430)



* All women were finally asked if they were currently using a method of contraception, regardless if they had received a method from MSI or a different service provider (n=430). Out of the 69 women who said no they had not seen a different service provider 9 were using a method that they had either purchased themselves or had a supply at home (e.g. condoms and pills). An additional 2 women who had declined to answer the previous question answered "no" to if they were using contraception or not at 4 weeks.

Table 15 shows the proportion of women who had a previous abortion and an abortion for the first time and what method of contraception they received from MSI. Slightly more women who had a previous abortion accepted a method from MSI compared to women who had an abortion for the first time (82.6%, n=100 and 77.9%, n=239 respectively). Nearly two-thirds of women (63%) received a long acting reversible method of contraception (LARC), and women who had a previous abortion were more likely to have started to use a LARC method than those women who were having an abortion for the first time (74%; n=74 and 59%; n=141 respectively, p=0.009). The majority of women having a first time abortion received the contraceptive pill (39.7%) followed by implants (28.5%) and injection (21.3%). Women who had more than one abortion were more likely to receive implants (30%), injection (25%), closely followed by the pill (23%) and IUD (17%) (see Table 15). One half of women who started to use a method (49.7%, n=118) said they chose their method because of what the consultation nurse said about the respective method. There was no difference between women who had an abortion prior to this one and women who had an abortion for the first time.

Table 15: Percent distribution of women who were given a contraceptive method at the MSI clinic and type of method received, by women who have had a previous abortion and one for the first time

	Had a previous abortion (n=121) %(N)	First time abortion (n=309) %(N)	Total women (n=430)
Given a contraceptive method at clinic after abortion (n=430)			
Yes	82.6 (100)	77.9 (239)	79.2 (339)
No	17.4 (21)	22.1 (68)	20.8 (89)
Method received from clinic (n=339)			
Pill	23.0 (23)	39.7 (95)	34.8 (118)
Condom	3.0 (3)	0.8 (2)	1.5 (5)
Injection	25.0 (25)	21.3 (51)	22.4 (76)
Implants	30.0 (30)	28.5 (68)	28.9 (98)
IUD	17.0 (17)	4.2 (10)	8.0 (27)
IUS	2.0 (2)	5.0 (12)	4.1(14)
Hormonal patch	0	0.4 (1)	0.3 (1)
Total received a LARC method¹¹	74.0 (74)	59.0 (141)	63.4 (215)
Total women	100	239	339

Women who received a short term method from MSI, such as the pill, condom and hormonal patch i.e. methods that were not administered in the clinic (n=124) were further asked if they had already started to use the method at the time of the interview (see Figure 2). A total of 83.8% (n=104) women said they had started to use their short term method. A total of 20 women (16.1%) had not started to use the method they received from MSI and the reasons for not yet starting this method were *not in a sexual*

¹¹ LARCs include the injection, implant, intrauterine device (IUD) and intrauterine system (IUS) methods of contraception.

relationship; changed mind and wanted a different method; MSI didn't have the method I wanted; going to my GP; waiting for my period to start, and haven't got round to it.

Four women who had received a LARC or short term method from the clinic had stopped this method by the time of the interview at four weeks. These women included one who had undergone more than one abortion and three women who had an abortion for the first time. Two women were stopping the pill, one woman the injection and the other one had her implant taken out. The reasons for stopping were *didn't like it, didn't like the side effects I felt, kept forgetting to take it and I'm not having sex at the moment*. Three of these women said they went to their GP to choose an alternative method.

Table 16: Further contraceptive service provision within 4 weeks post abortion among women who did not start a method of contraception or stopped using a method given by MSI immediately following their abortion (n=113)

	Had a previous abortion (n=27) %(N)	First time abortion (n=86) %(N)	Total women (n=113)
Did you see another service provider since MSI (n=113)			
Yes	51.9 (14)	34.9 (30)	38.9 (44)
No	48.1 (13)	65.1 (56)	61.1 (69)
Service provider (n=44)			
GP	85.7 (12)	83.3 (25)	84.1 (37)
FP clinic	7.1 (1)	13.3 (4)	11.4 (5)
Other	7.1 (1)	3.3 (1)	4.5 (2)
Total number	14	30	44

The women who had not received a method from MSI (n=89), and women who had either not yet started the method they received from the clinic (n=20), or who had stopped using their method after four weeks post abortion (n=4), were asked if they had seen another contraceptive service provider since their abortion. Table 16 shows that out of these 113 women, 44 (38.9%) said they had visited another contraception service provider. A higher proportion of women who had a previous abortion (51.9%) than those who had one for the first time (34.9%) had seen another service provider since leaving MSI. In addition, more women who had a surgical abortion compared to those who had an EMA and who left the clinic without contraception or who had stopped or not started to use the method they had received, went on to see another contraceptive service provider (41.8%, n=23 and 36.2%, n=21 respectively). The majority of these women went to their GP (84.1%, n=37) for contraception. Five women went to a family planning clinic and two went to other sexual health providers (see Table 16). The type of contraceptive method women obtained from a different service provider was not collected (n=53).

Method of abortion and contraception uptake

Table 17 compares the proportion of women and their contraceptive uptake immediately after the abortion at the MSI clinic and then at four weeks at the time of the interview by the method of abortion. More women who had a surgical abortion compared to those who had a medical abortion left the clinic with a method of contraception (84.7%, n=222 vs. 68.6%, n=107; p=0.000). This was statistically significant. Nearly one third of women (31.4%) who had a medical abortion did not leave the clinic with a method of contraception. As mentioned earlier, more women who had a surgical abortion compared

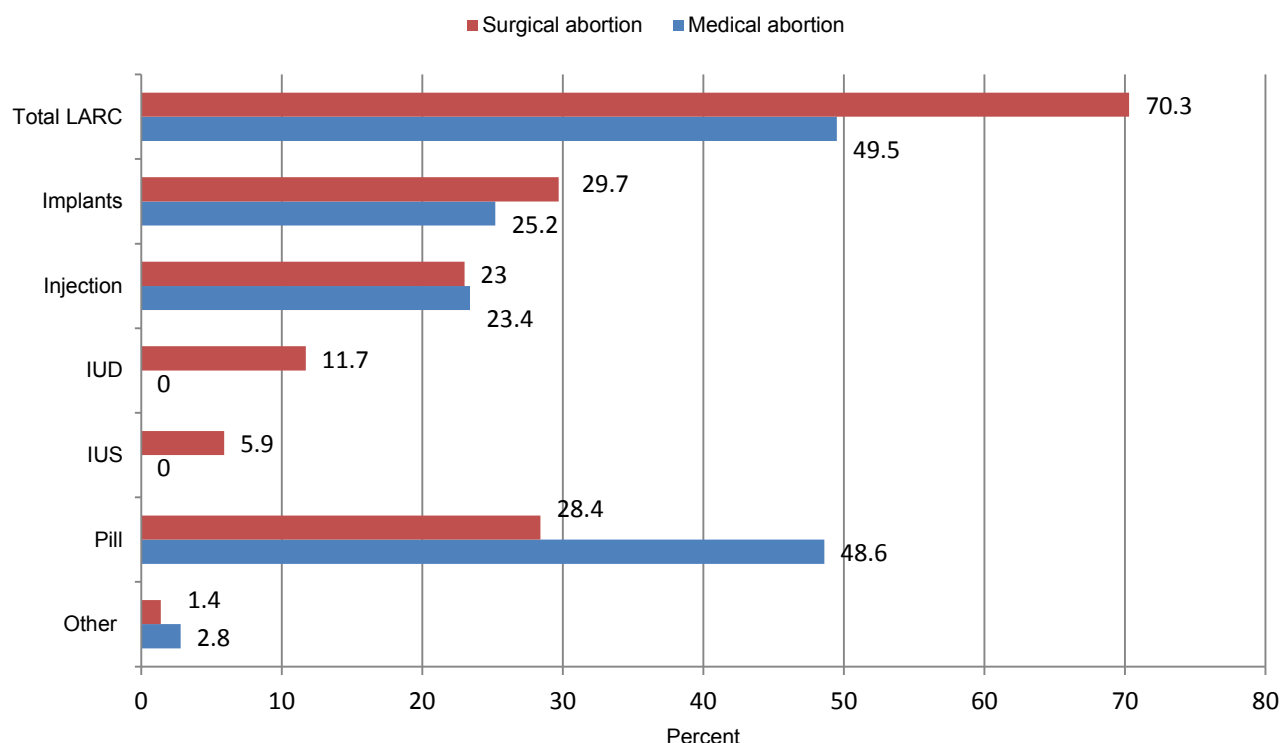
to those who had a medical were also using contraception at four weeks (88.2% vs. 80.3%; $p=0.026$), even though 11% more women who had a medical abortion had started to use a contraceptive by four weeks (see Table 17).

Table 17: Contraceptive uptake at clinic and use at 4 weeks by method of abortion

	Surgical abortion (n=263)	Medical abortion (n=157)	Total women (n=430)	p-value
Contraceptive uptake at clinic (n=418)¹²	84.7 (222)	68.6 (107)	78.7 (329)	0.000
Contraceptive use at 4 weeks (n=430)	88.2 (232)	80.3 (126)	85.6 (368)	0.026

Figure 3 shows that more women who had a surgical abortion started to use a LARC method of contraception compared to women who had a medical abortion (70.3%, $n=156$ vs. 49.5%, $n=53$; $p=0.000$), which was also statistically significant. More women who had a surgical abortion decided to have an IUD or IUS (11.7% and 5.9% vs. 0% and 0%), and the majority of women choosing a medical abortion were more likely to leave the clinic with the pill. (48.6%, $n=51$). There was however, not so much variance between women who had either a surgical or medical abortion and starting the injection, or having the implant administered at the time of their abortion (23.4% and 23% respectively for injection, and 29.7% and 25.2% respectively for implants) (see Figure 3).

Figure 3: Method of abortion and contraceptive method accepted immediately after abortion ($n=329$)



¹² Note, out of the 430 women, 10 cases were missing regarding method of abortion ($n=420$), and 2 cases missing for contraceptive uptake at clinic ($n=428$). Therefore the denominator for contraceptive uptake at the clinic was 418 women.

Not using contraception post abortion

Reasons for not using contraception at the time of the survey included *not currently in a relationship*, *fear or dislike of side effects* and *undecided about what method to use*. A high majority (87.1%, n=54) said they intended to start using a method in the next 6 months, with 63% of these women (n=34) saying they were “extremely sure” that they would start using. Six women (11.1%) said they were not at all sure they would start using. The most commonly reported method that women said they would use in the future was the contraceptive pill, followed by the injection. More women who had a previous abortion were likely to choose implants for their future contraception than women who had an abortion for the first time. The majority said they would get this method from their GP. Of these, most women said that they would be upset if they became pregnant again in the next 6 months (59%, n=35).

3.5 Contraceptive behaviour between abortions

The following tables show data only for women who reported to have had one or more previous abortions. These women were asked to recall their most recent previous abortion and their contraceptive decision making and behaviour following that abortion up until their recent abortion when they were recruited to the study. In total, 121 women out of 430 said they had an abortion previous to the one at the time of the survey. The majority of these women had one previous abortion (74.4%), with one quarter having had two or more previous abortions (25.6%). Nearly two thirds of women (62%, n=74) had a previous abortion less than 2 years prior to the one they just had, and one third (35.3%) had their last abortion within the past 12 months (see Table 18).

Table 18: Abortion history of women who have had more than one or more previous abortion

Women who have had more than one abortion (n=121) % (N)	
Number of previous abortions [mean number of abortions: 1.3]	
One	74.4 (90)
Two	24.8 (30)
Three	0.8 (1)
Length of time between latest and previous abortion	
1-5 months (less than 6 months)	6.7 (8)
Between 6-11 months	28.6 (34)
Between 12- 24 months (1-2 Yr)	26.9 (32)
Less than 24 months	62.2 (74)
More than 24 months (2yr+)	37.8 (45)

Table 19 shows the contraceptive method used by clients after their previous abortion, at the time they became pregnant again and after their recent abortion at MSI. Eighty two percent of women (n=99) said they started to use contraception after their previous abortion – the majority using short-term methods. 57.1% of women were using contraception when they became pregnant, and 52.8% were using condoms or pills. Out of the 121 women 22.3% had started a LARC method following their previous abortion but had discontinued. Following their recent abortion at MSI, 88.4% all women started using contraception, but this time more chose LARCs, such as the injection (20.7%), implants (24.8%) and IUD or IUS (14%). Reasons for not starting to use contraception following the previous abortion (n=19), was mainly user related (n=13) such as *didn't get round to it*, or *lack of thought*, with a smaller number citing relationship-related issues (n=3) and access related issues (n=3).

Table 19: Contraceptive use following previous abortion compared to most recent abortion (n=121)

	Following previous abortion	At time of latest pregnancy	4 weeks after latest abortion
After previous abortion started to use contraception (n=121)			
Yes	81.8 (99)	-	88.4 (107)
No	15.7 (19)	-	11.6 (14)
Can't remember	2.5 (3)	-	(0)
What method started to use (n=121)			
Nothing	18.1 (22)	42.9 (52)	17.4 (21)
Pill	53.7 (65)	34.7 (42)	19.0 (23)
Condom	5.8 (7)	18.1 (22)	2.5 (3)
Injection	6.6 (8)	1.7 (2)	20.7 (25)
Implants	11.6 (14)	0.8 (1)	24.8 (30)
IUD /IUS	4.1 (5)	(0)	14.0 (17)
Hormonal patch	(0)	1.7 (2)	1.7 (2)

Out of the 99 women who started to use contraception following their previous abortion, 65.6% said they started this method on the same day and one quarter (24.2%) said within the first month. Women did not use this method as their regular method of contraception for very long however, with 21% using up until three months and 66.7% saying they used this method for less than one year (see Table 20). Some of these women either ceased using contraception altogether, switched method, or became pregnant while using this method.

Table 20: Contraceptive use following previous abortion (n=99)

	N=99 %(N)
How long after abortion started to use contraception (n=99)	
Same day / immediately	65.6 (65)
Within the first month	24.2 (24)
Between 1-6 months	2.0 (2)
More than one year	8.1 (8)
How long used this method as a regular contraception (n=99)	
Up to 3 months	21.2 (21)
Between 3-5 months	15.2 (15)
Between 6-11 months	30.3 (30)
Between 1-2 years	19.2 (19)
More than 2 years	14.1 (14)

More than half of women (59.6%, n=59) decided to stop using their chosen method following their previous abortion. Furthermore, one quarter of these women (27%, n=16) stopped within less than 3 months of using the method, and 71.2% (n=42) did not use this method for more than one year. The main reasons given for discontinuation were side effects such as menstrual irregularities, as well as not renewing supply in time and forgetting to take the pill. Just over one half of the women who had stopped using a method decided to start another method of contraception (57.6%, n=34). Reasons for not starting a different method of contraception after stopping a method (n=25) were again user-related (n=18), followed by access related issues (n=3) and relationship related issues (n=2). Two women said they did not know why they did not start another method of contraception to protect them from pregnancy.

Women were also asked to say how much they agree or do not agree with some statements regarding how they felt about their abortion and pregnancy at the time of their previous abortion. Three quarters of women (74.4%, n=90) said they strongly agreed with the statement that “It was very important to me to avoid getting pregnant again following my previous abortion” demonstrating a strong motivation to want to prevent another unintended pregnancy. Although small in number, these women also used contraception for a longer duration than women who disagreed or responded neutral to this statement. Two thirds of women (65.3%, n=79) strongly agreed that “The decision to have the previous abortion was made by myself alone”, and a high majority of women (82.6%, n=100) strongly agreed that “Having the previous abortion was the right thing for me to do at the time”.

3.6 Satisfaction with abortion consultation and service experience

All women were asked to rate their satisfaction on a 5 point scale (1 being very satisfied and 5 very dissatisfied) with their consultation either on the telephone or at the centre prior to their abortion. They were also asked how satisfied they were about being given enough information about the procedure to help make their decision to have an abortion, as well as how well they were treated at the centre for their treatment.

Satisfaction levels were consistently high and there was no marked difference between women who had an abortion for the first time and women who had more than one abortion. The following table shows the percentage of women who scored “very satisfied”.

Table 21: Percentage of women who were very satisfied with different aspects of their abortion consultation and service (n=430)

	Total women % (N)
Satisfaction with your <i>telephone consultation</i> (n=360)	
Very satisfied	82.8 (298)
Satisfaction with your <i>consultation at the centre before your TOP</i> (n=69)	
Very satisfied	69.6 (48)
Satisfaction with given enough information about abortion to help make your decision (n=429)	
Very satisfied	83.9 (360)
Satisfaction with how were treated at the clinic when had abortion (n=429)	
Very satisfied	77.9 (334)
Advisor listened to what were saying when giving you contraceptive advice (n=418)	
Strongly agree	80.1 (335)
Advisor took personal needs into account in the contraceptive advice offered to you (n=418)	
Strongly agree	81.3 (340)

All the women were asked if they were offered contraceptive advice during their consultation either on the telephone or at the centre and asked to score how they rated the quality of this advice. A total of 97% (418) of all women said they were offered contraceptive advice during their consultation. Eighty percent of women both strongly agreed that the “Advisor listened to what you were saying when giving you contraceptive advice” and that the “Advisor took personal needs into account in the contraceptive advice offered to you”. There was a difference between women whose consultations were on the telephone and at a centre and their agreement with the “Advisor took your personal needs into account in the contraceptive advice offered to you”: 83% (n=292) of women who had a telephone consultation rated “strongly agree” compared to 73% (n=48) of women who used the centres.

4 Discussion and recommendations

This study has provided new findings to help understand why some young women have one or more unintended pregnancy. It also provides new insights into the contraceptive behaviours of young women following an abortion. This study indicates that some young women who have an abortion remain at risk of having another unintended pregnancy which may result in another abortion. It is vital that this new evidence is acknowledged so that policy makers and service providers can strive to improve services that help women exercise more effective reproductive control and potentially decrease unintended pregnancies.

The study identified seven key findings that are discussed in the following section:

Contraceptive use prior to abortion

1. The majority of all abortions follow contraceptive failures, particularly use of short term methods being used incorrectly or inconsistently.
2. Most women who had an unintended pregnancy that resulted in an abortion, did not use emergency contraception, either because they did not think about it, did not think they were at risk of getting pregnant, or had difficulties accessing it in time.

Contraceptive use following an abortion (all women)

3. While the majority of young women took a method of contraception from MSI immediately following their abortion, out of the women who did not, two thirds did not go on to see another service provider for contraception within the four weeks following abortion.
4. An uptake in contraception immediately following an abortion, while reducing the risk of pregnancy at the time, does not necessarily mean women will continue with that contraception, and not have another unintended pregnancy and abortion.

Women who have more than one abortion

5. One quarter of women aged 16-24 who had an abortion had experienced a previous unintended pregnancy that ended in abortion, and the majority of these women had done so within two years following their previous abortion.
6. There were no significant differences between the characteristics of women who have had a previous abortion and those having one for the first time. This makes it difficult to target services to a particular group of 'at risk' women.

Contraceptive use between abortions

7. The majority of subsequent abortions follow contraceptive failures following the previous abortion.

Contraceptive use prior to abortion

In this study more than half of the women (57%) who had an abortion at an MSI centre reported using contraception at the time they got pregnant, while 43% were not using any contraception at all. Women who were Black and from other ethnic groups (Asian and other), and single, were more likely to report not having used contraception at the time of getting pregnant. There were no differences between women who had a previous abortion and those having one for the first time. There was also no association between age and deprivation area and the use of contraception showing that women of different ages and socio economic backgrounds were equally and actively trying to avoid an unwanted pregnancy.

The majority of women were using short term methods such as the pill (54%) and condoms (40%), and the main source of contraception was the GP (50%) and pharmacy (25%). Inconsistent (26%) or improper method use (20%), including awareness that missing pills was a risk and failure to use additional protection when ill, accounted for most of contraceptive failures. This reflects the difficulties young women experience with their daily use of contraceptives. A quarter of women (28.7%) said they did not know why their method had failed to protect them from pregnancy.

Reasons for not using contraception at the time of pregnancy were mainly user related (69%) such as *not getting around to organising it*, getting *carried away* and a misunderstanding of pregnancy risk. Furthermore, only 12% of all women used emergency contraception, and there was no difference between women who used contraception and those that did not at the time of pregnancy. The main reasons for not using EC were not being aware that contraception had failed (66%) among those who had used contraception, and not knowing they were at risk of pregnancy (31%) or don't know (31%) among women who did not use contraception. More emphasis on when contraception (particularly the pill) may not work, on the risks of unprotected sex, as well as EC awareness and availability, during contraceptive counselling may help prevent unintended pregnancies.

Contraceptive use following an abortion (all women)

The benefits and importance of engaging with, and encouraging, women to start using effective contraception immediately after an abortion to reduce the risk of another unintended pregnancy is well documented [3, 15, 17, 18, 20, 22, 23, 28, 29]. Following abortion, a woman's fertility returns within two weeks [16], and women are unlikely to return to the abortion clinic for a follow up appointment [15]. The contraception consultation at the clinic is therefore a key opportunity to help women improve their reproductive control following an abortion. In this study, the uptake of contraception post abortion was very high with 86% of women using a method at four weeks. The majority of these women (79%, n=339) were given their method from MSI and most women continued with this method up until the time of the interview – although 24 women either did not start their method or stopped using it. Out of the 113 women who either did not receive, or were not using a method given by MSI, 39% (n=44) said they had seen a different service provider for contraception by four weeks.

Women who had a previous abortion were just as likely to be using contraception following their abortion as women who had an abortion for the first time. Some studies have shown that reported use of contraception in women undergoing another abortion to be higher than women undergoing a first time abortion suggesting that women who have more than one abortion are more motivated to avoid another pregnancy [3, 23]. This study has shown that there is no difference between these two groups of women in the decision to start using contraception post abortion, although there was significant difference between their choices of contraceptive method. Women who had a previous abortion were more likely to start using more effective contraceptive methods, such as implants, IUD / IUS and injection (LARCs) compared to women who had an abortion for the first time (74% and 59% respectively, p=0.009). Although the uptake of LARCs was consistently high (63%), the most commonly accepted single method was the pill with 35% (n=118) of all women and 40% of women having an abortion for the first time preferring to use this method. This shows that women, and particularly women who have an abortion for the first time, continue to choose the pill as their preferred contraceptive method, despite the encouragement of services to emphasise the long term effectiveness, convenience, and user satisfaction of LARC methods [30]. This suggests that LARCs may not be acceptable to all women, and should not therefore be viewed as 'the solution' to reducing rates of unintended pregnancy, although clearly important. A recent study found that some young women were unable to tolerate the side effects of the implant, and that encouraging retention (rather than dealing with distressing side effects and quickly providing an alternative (potentially LARC) method) could be counterproductive [31]. It is equally important that women who prefer to use the pill are well informed about how to use it correctly (including the importance of administering it at the same time each day and if they are unwell (vomiting and diarrhoea) to ensure other forms of protection are used) as well as being made aware of its failure rate [2, 11, 14, 20, 24].

This study has shown that there is a significant difference between the method of abortion women choose and the uptake of contraception immediately following that abortion. Women who had a surgical abortion were more likely to be using contraception at four weeks compared to women who had a medical abortion (88% vs. 80.3%; $p=0.026$), and furthermore, were more likely to be using a LARC method (70% vs. 50%; $p=0.000$). The administration of implants on the same day as medical abortion is possible [32], and this study did find an equal proportion of women having a surgical or medical abortion adopting implants as well as the injection. After the second abortion pill in a medical abortion, however, it is not possible for IUC to be inserted; women's choice of contraception methods at the time of a medical abortion is thereby limited. Interestingly, this study found that women who have had a previous abortion are more likely to choose a surgical abortion than a medical for their subsequent abortion. It is not certain from this study if this is associated with later gestation or any other factors. However, from other sources of MSI data analysis among young women who have more than one abortion¹³ it was shown that there was no difference between gestation data and choice of abortion method. It is possible that this may indicate women's awareness of (from previous experience) the limitations of choice of contraception immediately following administration of the second abortion pill at the clinic. More needs to be done to ensure women who choose early medical abortion services are provided with appropriate support and information to easily access IUC if this is their chosen method, as well as be provided with a bridging method of contraception if requested.

A high proportion of women (87%) who received a method from MSI at the clinic said they were satisfied with the method they received and half of these women (50%) said that their decision was influenced by what the MSI nurse had told them about the method. Furthermore, 59% of women said they were using the selected method for the first time, or had switched methods, thereby demonstrating the importance of ensuring a full range of contraceptive methods are available for women following an abortion. The study has not been able to calculate the extent to which this contraception uptake is reflective of women feeling motivated to start using a different form of contraception following an abortion, or how much acceptance of a new method can be attributed to the counselling of the service providers. This is particularly pertinent for the finding that more women who have more than one abortion are selecting LARC methods. Moreover, the women who said they would be upset if they got pregnant in the next 6 months following their abortion were more likely to have had an abortion for the first time (73%), compared to those who had a previous abortion (27%; $p=0.022$). This finding may provide insights into the long term motivation of using contraception, with some women having had more than one abortion feeling ambivalent about their desire to avoid another pregnancy.

Although all women were provided with contraceptive advice during their consultation and at the time of their abortion, 21% ($n=89$) were discharged after abortion without a method of contraception. These women either did not want to start using a method immediately after their abortion, their preferred method was not available, they were undecided what method to start, or they preferred to see a different service provider for contraception. At four weeks, 14% of women (62 out of 430) were not using contraception and more than half of these women ($n=36$) reported to be in a relationship at the time of the interview, and therefore likely to be sexually active. This emphasises the importance of contraception provision immediately after abortion.

There was no association found between age at abortion, relationship status and deprivation area and not starting to use contraception post abortion. There was a difference between ethnicity, with women of black ethnic origin, in addition to being the least likely to be using contraception at the time of getting pregnant, being also less likely to be using contraception at four weeks following an abortion compared to white and other ethnic groups ($p=0.018$). Although most women said they intended to use contraception they were delaying to protect themselves at a potentially high risk time post abortion.

¹³ As documented in the first component of this research study: Bury, L. 2013. Trends and characteristics of young women under 25 years who have had more than one abortion: a review of MSI client data between 2007-2011. London: Marie Stopes UK (Unpublished).

Reasons for not using varied from still waiting for their body to get back to normal or for an appointment, undecided or not wanting to start a method due to dislike of side effects. This indicates that this sub-group of women (61% of women who did not receive a method from MSI, nor see another service provider) may be uncertain or ambivalent about selecting contraception; this may be why they did not leave the clinic with a method. It is therefore very important that these women are signposted clearly to other services if they are undecided about contraception at the time of abortion. In a recent study among young women and contraception risk-taking it found that the lack of understanding and prevailing myths about fertility played a big role in why young women became pregnant unintentionally [26]. It is thus, further suggested that more could be done during the contraceptive counselling to highlight the quick return to fertility (as well as fertility knowledge in general) following abortion, as well as a fuller discussion on the side effects of different methods and how these can be managed.

Women who have more than one abortion

One aim of this study was to find out if there were any differences between women who have had a previous abortion and those having one for the first time, in particular with respect to their decision to start using contraception post abortion – as tested in the null hypothesis that there are no factors related to the outcome of having more than one abortion and starting to use contraception post abortion. This was in order to try to identify particular groups of women who may be ‘at risk’ of another unintended pregnancy, so that appropriate interventions to address their needs might be developed. One important conclusion that has emerged from this study is that there are no specific groups of women who appear to be more likely to have more than one abortion, with the unsurprising exception of age. Women aged 19-24 – compared to women aged 16-18 – were more likely to have had more than one abortion but this is related to these women being older and thus having had more years of exposure to risk of pregnancy. As documented elsewhere [1, 23] women from more deprived areas were also shown to be more likely to have had a previous abortion as well as a higher proportion of black women than other ethnic groups, but these data were not statistically significant in this study.

These findings challenge widely held representations of women who have more than one abortion as ‘irresponsible’, ‘feckless’, ‘repeat offenders’ or using abortion as a form of contraception [7]. Instead, this study has found a majority of young women who had a previous abortion (82%) were motivated and persevered to protect themselves from another unintended pregnancy but unfortunately were either failed by their chosen contraceptive method or did not use it correctly. It is possible that more could be done to provide these women with enough contraceptive choice as well as accurate information about, and support to use, short term methods (when it is a preferred method) to help them exercise more effective control over their reproductive health.

This shows that women, and particularly women who have an abortion for the first time, continue to choose the pill as their preferred contraceptive method, despite the encouragement of services to emphasise the long term effectiveness, convenience, and user satisfaction of LARC methods.

Contraceptive use between abortions

This study has provided detailed information about contraception use during the interval between women's previous abortion and their most recent abortion. Despite a high uptake of contraception immediately, and at four weeks post abortion, this does not necessarily mean that these women will continue using contraception or that they will not have another abortion. In the light of what is known about patterns of women who have successive abortions, it is likely that one quarter of women aged 16-24 who have an abortion for the first time will go on to have another unintended pregnancy and abortion. Other studies have shown that contraceptive use increases after abortion [17, 20], particularly with LARC methods, but women are still at risk of another unintended pregnancy due to poor continuation rates [17, 22, 33].

Among the 121 women who had a previous abortion, 82% (n=99) started to use contraception following their last abortion, and the majority did so immediately (66%) or within one month following their last

abortion (24%). Most women started to use the pill (54%) and 22% had chosen a LARC method, such as injection, implants and IUD/IUS. More than half of women (60%, n=59) stopped using their method of contraception, with 27% of these women stopping within less than 3 months and 71% not using this method for more than one year. Women using LARC had stopped using their method within a year, due to side effects such as menstrual irregularities. This suggests that the initial response to contraceptive counselling is positive, but then because women struggle to use these (hormonal) methods there is a decline in motivation resulting in discontinuation of LARC. Women who stopped after three months were largely women who were experiencing side effects or who had run out of their supply of pills. The latter obviously did not seek a new supply from another service provider.

A majority of the women who had a previous abortion started to use a LARC method following their recent abortion. Some of these women had already tried a LARC method following their previous abortion, but stopped mainly due to problems with using the method. Their renewed effort to use LARC could indicate that women are motivated and feel more confident to use these methods with improved counselling. In a recent study conducted in the US by Diedrich et al [13], evaluating 121 women's concerns 2-3 months after their post abortion insertion of intrauterine contraceptives (IUC), it was found that, although women had received extensive counselling, they did not necessarily retain information about expected side effects provided at this time. One half of the women had questions or concerns about their method afterwards. The authors also highlight the importance of recognising that contraceptive counselling in the context of abortion may be different from other contexts, since the emotional, cultural and medical context of receiving care may affect women's ability to retain information. If contraceptive counselling in the post abortion context could be improved to include ongoing support and / or advice to help women manage expected side effects following discharge from the abortion service, this could improve method acceptability and potentially increasing continuation rates of LARC methods.

Limitations

This study has several limitations. First, the study relied on women's self-reporting of their previous abortion history and it is likely that the number of women with a history of having more than one abortion is underestimated [34-36]. Slightly more women in this study revealed having a previous abortion than those who disclosed during their clinical consultation prior to recruitment for this study. Second, whilst post abortion uptake at four weeks provided a good insight into women's initial uptake and motivation, further follow up for a longer period was not possible within the timeframe and resource limitations of the study.¹⁴ Third, it was not possible to confirm in this study whether women who have had a previous abortion are more likely to start using LARC because of service factors or personal motivation to adopt these methods. Fourth, the method of telephone interview limited the length of the interview and what type of questions could be included. Other factors relating to sexual behaviour, including relationship issues and non-consensual sex that could be important predicting factors could not be included in such a short survey. The telephone interview also excluded non-English speaking women seeking abortion who may have different and more acute needs with regard to accessing contraception and controlling their reproductive health. Lastly, it should also be noted that this study represents the experience and views of young women, and does not include a perspective from the provider that could enrich a wider understanding about post abortion contraceptive services.

¹⁴ Although this was beyond the scope of this study, it would be possible to follow up these women at a later stage, as a high majority gave permission to be contacted again for research purposes.

Recommendations

This study indicates that young women who have an abortion are motivated users of contraception after abortion, but that some women face difficulties in using (and stop or change method), or have difficulty in using contraception effectively in the immediate post abortion period. It also demonstrates the complexity surrounding why some young women who have an abortion find it difficult to practice contraception effectively to avoid another unintended pregnancy. It is clearly not just an issue of encouraging these women to start contraception, with a focus on LARCs but, more importantly, it is crucial to provide ongoing support to women to manage side effects and continue these methods, or adjust their choice of methods according to the difficulties women experience in their daily use of contraceptives as well as changing lifestyles.

The results of this study demonstrate an urgent need to:

- improve access to, and provision of, the full range of contraceptive methods including emergency contraception, as recently recommended by NICE [10];
- facilitate more effective use of, all contraceptive methods by providing continuing support to women who use these methods to:
 - help them manage side effects;
 - understand when the contraceptive pill may lose efficacy
- improve the quality of information about fertility available to women, including advice on the quick return to fertility after abortion.

In order to help women exercise reproductive control more effectively the following actions are recommended:

For Local Authorities and Clinical Commissioning Groups

1. Systematic and adequate commissioning of contraceptive consultation and provision at the abortion provider:

Abortion providers need sufficient time to communicate effectively about contraception pre and post abortion. Commissioners and providers need to give greater acknowledgement to the importance of this crucial aspect of the abortion service in order to enable time to ensure women's contraceptive counselling needs are met, to ascertain whether they feel confident to use contraception effectively, and/or understand where they can go for further contraception services if they prefer an alternative provider. If a woman's chosen method of contraception is not available – for example, IUC following a medical abortion – or she is unwilling to discuss contraceptive advice, then providers need to supply a suitable bridging contraceptive method. Delaying the provision of contraception, for example by handing this responsibility to another provider, such as GPs (by signposting only) is likely to increase the risk of another unintended pregnancy, especially when women do not come back to the clinic for a follow up visit.

2. Develop improved pathways between abortion providers, and local contraception services including General Practice:

There is a need to improve communication between abortion providers and locally based sexual health services. Young women need to be informed of where to go for follow-up services after their abortion, particularly if the abortion clinic is far from their home or if they do not want to return to the clinic for sexual health advice and contraceptive provision. Further, it is important to acknowledge that abortion may be a difficult time for some women who, as a consequence, may not feel ready to undergo contraceptive counselling; health care providers should therefore develop strategies to deliver information tailored to the particular needs of women in this specific context.

3. Work towards the integration of abortion and contraception services:

There is a need for commissioning bodies to explore the possibility of bringing abortion and other sexual health services together effectively so that women can access all services in one place. With better linkage women could be served and followed up more easily and efficiently. This would be especially important for: those women who did not start a method of contraception immediately after their abortion; the management of side effects of contraceptives including LARCs; women who had a medical abortion and their access to their method of choice (such as IUC) was limited; and those who have discontinued their initial method to ensure they are offered alternative methods of their choice. Abortion providers could press to extend further the range of services they offer to address women's reproductive health portfolio of needs.

4. To ensure adequate commissioning of specialist training for all providers of contraception:

Commissioners need to acknowledge and improve competency based training for provision and counselling about contraception, including emergency contraception, and sexual health among all non-specialist providers in primary care.

5. Improve availability of, and young women's access to, all forms of emergency hormonal contraception:

Emergency contraception needs to be made more widely available to women so they can access it at any time. EC also needs more publicity, including how and where the IUD as EC can be accessed. There also needs to be improved information about its correct use and about when EHC might fail.

For service providers

6. Improve communication about the quick return to fertility following an abortion:

Service providers as well as other sexual health education sources need to highlight the quick return to fertility immediately after abortion, as well as provide more information about fertility and pregnancy risk in general.

7. Investigate ways of improving women's understanding and use of emergency hormonal contraception:

It is important that young women's knowledge of, and understanding about, emergency contraception is improved, including the use of the emergency IUD. Women need to know exactly when to use EC (especially when the pill may not work effectively, or when the condom has failed), the time period during which EC can work, when it might fail, and where and how women can access EC. Use of the phrase 'morning after pill' should be strongly discouraged. For women who choose a user-dependent method or no contraceptive method at all, should also be provided with EHC as a back up immediately following their abortion.

8. Improve competency of all providers of contraception through specialist training:

There is a need for improved competency based training on contraception and sexual health among all non specialist providers in primary care, particularly as General Practices provide and counsel the majority of contraceptive care and young women may prefer to access these services for their contraception. In particular, as the contraceptive pill is still the method of choice for many women – and this is widely provided in General Practices – more needs to be done to improve communication about the circumstances when the pill may fail to work, what women can do in regards to emergency contraception and where women can go if they have questions about the pill. It is important that all who provide contraception to women are familiar

with the most recent Faculty of Sexual and Reproductive Healthcare (FSRH) guidance on all available methods.¹⁵

9. Implement different ways to remind young women about renewing contraception:

Improve the use of available and popular technologies, such as automated text messaging, email or social media (with women's consent) to communicate: reminders to resupply pill prescriptions, or when to take additional protection for example.

10. Consider new ways to reduce LARC discontinuation:

Contraceptive advice and counselling should emphasise both the positive aspects of LARC and possible negative side effects, and should include advice about how to manage the latter. Some women may require more support or reassurance to help them with their contraceptive 'journey' and could benefit from, for example brief regular follow up telephone calls or texts to address questions regarding their chosen method. Such reminders would be a cost effective way to enhance continuation. It could also serve as an efficient way to identify women who want to stop using their LARC method but may be willing to try another long term method. This approach could also be applied to women not using LARCs, but less effective user-dependent methods such as the pill and condom.

11. Reduce the stigmatisation of women who have more than one abortion:

There are no clear criteria for categorising women who seek one or more abortion. The risk of having more than one unintended pregnancy can affect all women. In this study, young women who experienced more than one abortion were as likely to be in a stable relationship as women undergoing only one abortion and from a similar range of socio-economic and ethnic backgrounds. Regardless of whether women have had a previous abortion or are having one for the first time, they should all be treated in the same way, non-judgementally, by service providers.

For researchers

12. Further research among abortion providers:

More research is needed to understand the service provider perspective about what happens at the abortion clinic with regard to the type and level of engagement between the provider and woman, particularly about her contraceptive options following an abortion.

13. Research among minority, non-English speaking women:

One limitation of this current study was that it excluded women having an abortion who could not speak English well enough to conduct a telephone interview. An understanding about the contraceptive decision making and behaviours among this population could help in addressing their contraceptive needs.

14. Further research about the integration of abortion and contraceptive services:

It would be useful to investigate the actual and potential barriers (e.g. attitudinal, financial) to greater integration of abortion services and contraception provision.

15. Consumer led research among women for service provision:

More needs to be understood about the types of service that women who use them want, with regards to abortion and contraception provision, to ensure their engagement with services is designed to meet their reproductive health needs. Such research could include explorations of the relationship between women's choice of abortion method and post abortion contraception, and choice of subsequent abortion methods.

¹⁵ http://www.fsrh.org/pages/clinical_guidance.asp

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